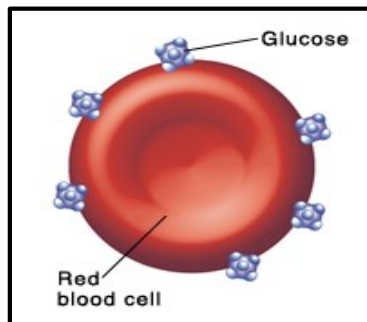


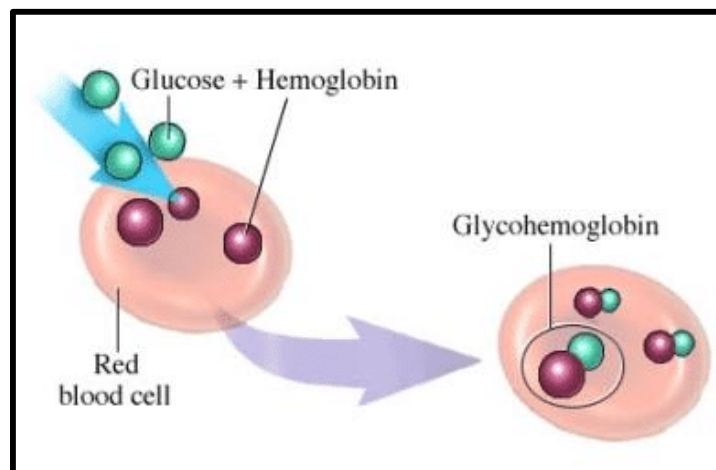
Hemoglobin A1c (HbA1c) Test

Hemoglobin A1c (HbA1c) test: measures the amount of blood sugar (glucose) that is attached to hemoglobin. This amount reflects or shows what the average level of glucose has been over the past three months in the blood circulation of a patient or an individual. It's an average of about three-months because that's typically how long a red blood cell lives.



Other names: HbA1c, glycated hemoglobin , A1c, glycohemoglobin, glycosylated hemoglobin

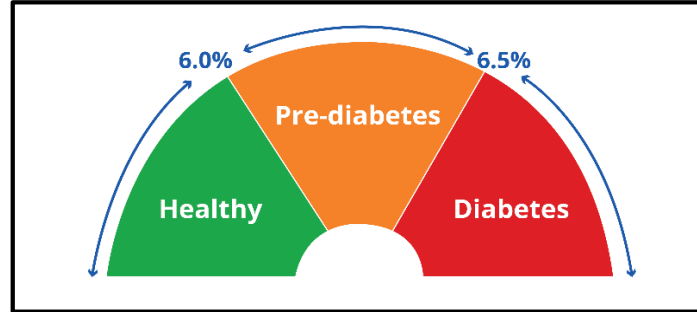
- Hemoglobin is the oxygen-carrying pigment that gives blood its red color. About 90% of hemoglobin is hemoglobin A (the "A" stands for adult type). approximately 8% of hemoglobin A is made up of minor components . These minor components include hemoglobin A1c, A1b, A1a1, and A1a2. Hemoglobin A1c (HbA1c) is a minor component of hemoglobin to which glucose is bound.



HbA1c ratio is measured for diabetic patients to check their glycemic control particularly to see the effects of diet, exercise, and drug therapy on their blood glucose. It is also used to diagnose type 2 diabetes.

Normal HbA1c Levels :

Normal : Below 5.7 %
Prediabetes : 5.7% to 6.4%
Diabetes : 6.5% or greater



Increased value of HbA1c :

- 1- Newly diagnosed diabetic patients
- 2- Poorly controlled diabetic patient
- 3- Patients with splenectomy
- 4- Pregnancy
- 5- Iron deficiency anemia, vitamin D3 deficiency

Medical conditions that may **falsely decrease** HbA1c:

1. Acute or chronic blood loss
2. Sickle cell disease
3. Thalassemia



تحمل الجلوكوز OGTT (mg/dL)	سكر صائم FBG (mg/dL)	سكر تراكمي A1C (%)	
200 او اكثر	126 او اكثر	6.5 او اكثر	الشكري
199 - 140	125 - 100	6.4 - 5.7	ما قبل الشكري
اقل من 140	اقل من 100	حوالي 5	طبيعي

Prepared by: Ali Abduraseool Hussein

Reviewers: Walaa A. Abdulrahman

Abdulkareem H. Issa